
DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for *Cereus Robinii* (Key Tree-Cactus)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service proposes to determine *Cereus robinii* (Key tree-cactus) to be an Endangered species under the authority contained in the Endangered Species Act of 1973, as amended. *Cereus robinii* occurs in the Florida Keys and in Cuba, where its range and population numbers have been drastically reduced. The remaining five U.S. populations, three of which occur on privately-owned land, are threatened by the continuing urbanization of the Keys and by horticultural exploitation. If this proposal is made final, a determination that *Cereus robinii* is an Endangered species would implement the needed protection provided by the Endangered Species Act of 1973, as amended. The Service seeks data and comments from the public on this proposal.

DATES: Comments from all interested parties must be received by September

27, 1983. Public hearing requests must be received by September 12, 1983.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Endangered Species Field Station, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207. Comments and materials received will be available for public inspection during normal business hours, by appointment, at the above address.

FOR FURTHER INFORMATION CONTACT: Mr. David Wesley, Endangered Species Field Supervisor, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207, (904/791-2580).

SUPPLEMENTARY INFORMATION:

Background

Cereus robinii, a member of the cactus family or Cactaceae, consists of two varieties, *Cereus robinii* var. *robinii* and *Cereus robinii* var. *deeringii*. Both varieties are covered by this proposed rule. *Cereus robinii* was originally described as *Pilocereus robinii* by the French botanist Lemaire in 1864, based on specimens from Cuba. Other names which have applied to this species include *Cephalocereus keyensis*, based on material from Key West, Florida (Britton and Rose, 1909), and *Cephalocereus deeringii*, based on a plant from Lower Matecumbe Key, Florida (Small, 1917). Benson (1969) considered these taxa to be conspecific with *Pilocereus robinii* Lemaire, which he transferred to the genus *Cereus*. He considered *Cephalocereus deeringii* Small to represent a variety of *Cereus robinii*. *Cereus robinii* var. *robinii* has now been reduced to a few locations in the Florida Keys and Cuba, while *Cereus robinii* var. *deeringii* has not been seen for many years and is probably extinct.

Cereus robinii is the largest of the native Florida cacti. Its erect, branched stems reach heights of 8 meters (25 feet). The succulent stems are cylindrical, spiny, and light or bluish-green, and measure 7-10 centimeters in diameter. The beautiful flowers, which open in the late afternoon or evening, are 5-6 centimeters long and vary from white to green to purplish. The fruit is a dark red berry which measures 3-5 centimeters in diameter. *Cereus robinii* is the only native Florida cactus which stands erect at maturity and is considered a tree. This unique cactus occurs in rocky hammocks of the Florida Keys and Cuba. Early botanists describe *Cereus robinii* as locally abundant. However, the plant communities in which *Cereus robinii* occurs have largely disappeared from the Keys due to development and

urbanization, and today *Cereus robinii* has been pushed to near extinction. Of the five remaining populations, three occur on privately-owned land and are very vulnerable due to the continuing urbanization of coastal Florida and the Keys.

Previous Federal protective actions began with Section 12 of the Endangered Species Act of 1973, which directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be Endangered, Threatened, or extinct. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975. On July 1, 1975, the Service published a notice in the *Federal Register* (40 FR 27823) of its acceptance of the report of the Smithsonian Institution as a petition within the context of Section 4 of the Act, and of its intention thereby to review the status of the plant taxa named within. On June 16, 1976, the Service published a proposed rule in the *Federal Register* (41 FR 24523) to determine approximately 1,700 vascular plant species to be Endangered species pursuant to Section 4 of the Act. This list of plants was assembled on the basis of comments and data received by the Smithsonian Institution and the Service in response to House Document No. 94-51, and the July 1, 1975, *Federal Register* notice. *Cereus robinii* was included in all three of these documents. General comments on the 1976 proposal are summarized in an April 26, 1978, *Federal Register* publication (43 FR 17909). The Endangered Species Act Amendments of 1978 required that all proposals over 2 years old be withdrawn. A 1-year grace period was given to proposals already over 2 years old. On December 10, 1979, the Service published a notice withdrawing the June 16, 1976, proposal along with four other proposals which had expired (44 FR 79796). The Service is reproposing *Cereus robinii* to be an Endangered species.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; under revision to accommodate 1982 amendments to the Act) set forth the procedures for adding species to the Federal list. The Secretary of the Interior shall determine whether any species is an Endangered or a Threatened species due to one or more of the five factors described in Section 4(a)(1) of the Act. These factors and their application to *Cereus robinii* are as follows:

A. The present or threatened destruction, modification, or curtailment of its habitat or range. Historically, *Cereus robinii* was known from at least 11 sites in the Florida Keys and also from at least two sites in Cuba. Today only five sites remain in the Florida Keys, a reduction of almost 60 percent. Twelve areas of suitable habitat within the historical range of *Cereus robinii* in Florida were searched in June 1979, but in only four of these areas was *Cereus robinii* relocated (Austin, 1980). One of these sites, on Layton's Hammock, was visited again in August 1979, and most of the hammock and its vegetation had been bulldozed. Part of the hammock containing the cacti was turned into a borrow pit several feet deep (Austin, 1980). This site was presumed extirpated, but was rediscovered in 1982.

A fifth site was discovered on private property in 1982. One of the historical sites for *Cereus robinii* was Key West, Florida. Small (1917) described this cactus as being abundant on Key West at one time, but being on the verge of extermination due to the destruction of the hardwood hammocks for firewood and for building sites. It was apparently extirpated by land clearing for a military base during World War II, and today, no specimens can be located there. Only two of the five sites where this species still occurs today are protected, one site located on land administered by the U.S. Fish and Wildlife Service (National Key Deer Refuge), and the other on land administered by the State of Florida, Department of Natural Resources (Long Key State Park). The plants on privately-owned land are especially vulnerable to destruction through the continuing development of the Keys.

The past destruction of hardwood hammock habitat has reduced *Cereus robinii* to a very vulnerable level, and its future is now uncertain. The Florida Keys still are undergoing rapid residential and recreational development. This has resulted not only in the loss of populations of the cacti discussed in this rule, but also of the entire hardwood hammock habitats where they once grew.

In Cuba, *Cereus robinii* has suffered a similar plight. Housing and recreational development have destroyed a large percentage of the species' habitat. *Cereus robinii* has been reduced to only a couple of remaining localities in Cuba as well as in the Keys and it is now considered Endangered throughout its range by the International Union for the Conservation of Nature and Natural Resources (Lucas and Synge, 1978).

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* *Cereus robinii* is an attractive species with high horticultural potential. The horticultural value of these cacti as landscape ornamentals, and the consequent exploitation, has been mentioned by many authors (Lucas and Synge, 1978; Little, 1975; Austin, 1980). Like many other species of cacti, *Cereus robinii* is vulnerable to over-collection due to the activities of some collectors, hobbyists, and societies. *Cereus robinii* could potentially be extirpated from its remaining sites by such activities. Since three of the populations occur on privately-owned land, control of taking of these attractive plants is a special problem. Even on public lands, the enforcement of taking prohibitions has been found to be difficult. Observation of one population of *Cereus robinii* showed evidence of vandalism in the form of cut-off branches and carved initials on the branches (Austin, 1980).

C. *Disease or predation* (including grazing). Not applicable to this species.

D. *The inadequacy of existing regulatory mechanisms.* *Cereus robinii* is listed as Endangered under Florida law, offering it some protection from taking, intrastate transporting, and selling. However, this protection does not protect its habitat and, by itself, will probably not be adequate to prevent the species' further decline. The collection of plants is also prohibited on State Parks and on National Wildlife Refuges, but these prohibitions are difficult to enforce. All native cacti are on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, which regulates export of this plant, but does not regulate interstate trade or habitat destruction. The Endangered Species Act would offer additional protection for the species, through Section 7 interagency coordination, and through Section 9, which prohibits taking with intent to reduce to possession on Federal lands.

E. *Other natural or manmade factors affecting its continued existence.* Restrictions to specialized habitats and geographically limited ranges tends to intensify any adverse effects upon the populations of any rare plant. This is certainly true for *Cereus robinii*, and is increased by the large amount of destruction which has already taken place. The small remaining populations of *Cereus robinii* are also threatened by natural factors, such as hurricanes. Small (1917) describes the destruction and damage of a population due to windthrow after a hurricane passed over the Keys. The growth habit of *Cereus*

robinii makes it particularly vulnerable to this natural phenomenon. The reduction of the natural vegetation of coastal Florida and the Keys has reduced the natural buffering capacity to storm effects, increasing the vulnerability of the remaining cacti.

Critical Habitat

Section 4(a)(3) of the Endangered Species Act, as amended, requires that, to the maximum extent prudent and determinable, the Secretary shall specify any habitat of species which is considered to be Critical Habitat at the time of determining the species to be Endangered or Threatened. The Act defines "Critical Habitat" as (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of Section 4 of the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection, and (ii) specific areas outside the geographic area occupied by the species at the time it is listed in accordance with the provisions of Section 4 of the Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

As discussed under Factor B in the "Summary of Factors affecting the Species," *Cereus robinii* is threatened by taking, an activity not regulated by the Endangered Species Act with respect to plants, except on Federal lands. Publication of Critical Habitat descriptions would make this species even more vulnerable. Therefore, it would not be prudent to determine Critical Habitat for *Cereus robinii* at this time.

Available Conservation Measures

The protection which will be offered to *Cereus robinii* once it is listed is discussed below:

Subsection 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species which is proposed or listed as Endangered or Threatened. Federal agencies are required under Section 7(a)(4) to informally confer with the Service on any action that is likely to jeopardize the continued existence of a species proposed for listing under Section 4. When species are listed, Section 7 requires Federal agencies to insure that activities they authorize, fund or carry out are not likely to jeopardize the continued existence of the species.

The Act and implementing regulations published in the June 24, 1977, Federal

Register set forth a series of general trade prohibitions and exceptions which apply to all Endangered plant species. The regulations pertaining to Endangered plants are found at 50 CFR 17.61 and 17.62 and are summarized below.

With respect to *Cereus robinii* all trade prohibitions of Section 9(a)(2) of the Act, implemented by 50 CFR 17.61, would apply. These prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, or sell or offer for sale this species in interstate or foreign commerce. Certain exceptions would apply to agents of the Service and State conservation agencies. The Act and 50 CFR Section 17.62 also provide for the issuance of permits to carry out otherwise prohibited activities involving Endangered species under certain circumstances.

Section 9(a)(2)(B) of the Act, as amended in 1982, states that it is unlawful to remove and reduce to possession Endangered plant species from areas under Federal jurisdiction. The new prohibition would apply to *Cereus robinii*. Permits for exceptions to this prohibition are available through Section 10(a) and 4(d) of the Act, following the general approach of 50 CFR 17.62, until revised regulations are promulgated to incorporate the 1982 amendments to the Act.

Requests for copies of the regulations on plants, and inquires regarding them may be addressed to the Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, DC 20240 (703/235-1932).

Cereus robinii is already on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, which requires a permit for export. International and interstate commercial trade in this species is minimal or nonexistent. It is anticipated that few permits involving plants of wild origin would ever be issued, since these cacti are not common in the wild or in cultivation.

Public Comments Solicited

The Service intends that any rules finally adopted will be accurate and as effective as possible in the conservation of any Endangered or Threatened species. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, private interests, or any other interested party concerning any aspect of these proposed

rules are hereby solicited. Comments particularly are sought concerning:

1. Biological or other relevant data concerning any threat (or lack thereof) to *Cereus robinii*.

2. The location of any additional populations of *Cereus robinii* and the reasons why any habitat of this species should or should not be determined to be Critical Habitat as provided by Section 4 of the Act;

3. Additional information concerning the range and distribution of this species;

4. Current or planned activities in the subject area and their possible impacts on *Cereus robinii*.

Final promulgation of the regulations on *Cereus robinii* will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within 45 days of the date of the proposal. Such requests should be made in writing and addressed to the Endangered Species Field Supervisor, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207 (904/791-2580).

National Environmental Policy Act

A draft Environmental Assessment has been prepared in conjunction with this proposal. It is on file in the Service's Endangered Species Field Station, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida

32207 (904/791-2580), and may be examined during regular business hours, by appointment. A determination will be made prior to the time of a final rule as to whether this is a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969 (implemented at 40 CFR Parts 1500-1508).

Authors

The primary authors of this proposed rule are Ms. E. LaVerne Smith, Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, D.C. 20240 (703/235-1975), and Dr. Andrew F. Robinson, Jr., U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 NE. Multnomah Street, Portland, Oregon 97232. Mr. Marshall P. Jones of the Service's Atlanta Regional Office served as editor.

References

Austin, Daniel F. 1980. Endangered and Threatened Plant Species Survey in Southern Florida and the National Key Deer and Great White Heron National Wildlife Refuges, Monroe County, Florida. Contracted report submitted to the U.S. Fish and Wildlife Service, March 1980.

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America. Contributions from the National Herbarium. XII:416.

Little, Elbert L., Jr. 1975. Our Rare and Endangered Trees. *American Forests*. 81(7):18.

Lucas, Gran, and Hugh Synge. 1978. *The IUCN Plant Red Data Book*. Published by the International Union for the Conservation of Nature and Natural Resources with financial assistance from the World Wildlife Fund.

Small, John K. 1917. The Tree Cacti of the Florida Keys. *Journal of the New York Botanical Garden*. 18:199-203.

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List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Proposed Regulation Promulgation

PART 17—[AMENDED]

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I Title 50 of the U.S. Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 reads as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531, *et seq.*).

§ 17.12 [Amended]

2. It is proposed to amend § 17.12(h) by adding, in alphabetical order the following to the list of Endangered and Threatened plants:

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Cactaceae—Cactus family:						
<i>Cereus robinii</i>	Key tree-cactus	U.S.A. (FL); Cuba	E		NA	NA

Dated: June 9, 1983.

J. Craig Potter,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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